

Sabbatical Report 2105

Timothy J. Linder
Associate Professor
Department Chair - Design Visual and Performing Arts
Humanities & Social Science Division

Within my instructional discipline (Digital Media) rapid changes are always taking place in the many areas of technology and the skills required for professionals in the field. One of the facets of Digital Media is the creation of virtual environments for use in education, simulation, research and entertainment. I investigated some of these changes by developing a detailed study, development project and creation of an educational module relating to interactive design and virtual world creation. I have been passionate about the creation of these environments throughout my career. The work during my sabbatical has helped to advance my instructional capabilities and provided resources for other faculty in my area. In addition I was able to create projects to showcase the college and help to provide material as I apply for grants.

The objectives I planned to achieve during the sabbatical semester were:

GOAL 1: To learn more about the options and technologies being used in virtual environments and augmented reality.

To achieve this goal I spent much of my time researching the subject online, completing several courses on virtual environment development, and meeting with area professionals in the field. The time required to investigate, learn, and develop new virtual environments and turning them into a course module is substantial and very difficult to accomplish within a semester with a full teaching load.

GOAL 2: To gain greater skill and knowledge with the Unity game engine. The Unity game engine is a popular choice for many educational institutions for teaching the development of virtual environments and interactive design.

I met with several area professionals utilizing the Unity Game engine in their everyday workflow. I also took several courses on the subject and created multiple projects with the tool that are outlined below.

GOAL 3: To provide measurable results of the studies above by the production of a working virtual environment that will be developed in a game engine.

I developed several working virtual environments that can be used as teaching tools. I also plan to present these projects in conferences, submit them for awards in the field, utilize them

to recruit students, use them as examples of work to apply for grants and show them to other faculty outside my area in hopes of collaborating on similar projects. Some of the specific development I worked on are as follows.

The Virtual Meramec Art Gallery is an interactive architectural visualization of the STLCC – Meramec Art Gallery. The show depicted in the VR visualization is the 2015 Student gallery show. The project is set up to add forthcoming shows, which the user could quickly change to. The virtual gallery is also optimized to run on an Oculus Rift head mounted display and can be run in a web browser with the Unity plugin installed.

http://www.timlinder.com/Sabbatical2015/Gallery4.1_web/Gallery4.1_web.html

In addition I completed the Sensory Garden & Playscape, a landscape visualization I created in Unity 3D of a project conceived and designed by my colleague and good friend Mike Swoboda. It is a reimagined playground for elementary students with specific learning disabilities. The visualization is being used for planning and fundraising efforts in hopes of developing a real park.

http://www.timlinder.com/Sabbatical2015/SensoryGarden_v3_web/SensoryGarden_v3_web.html

GOAL 4: To create a new teaching module for interactive design courses that address theoretical, technical and aesthetic issues in the areas of virtual environments.

A teaching module was created and shared in blackboard including presentations, assignments, and video tutorials.

GOAL 5: To compare the curriculum and technologies employed in regional and national courses in interactive design and virtual environments.

A document was written, that compared the curriculum and technologies employed in regional and national courses in interactive design and virtual environments and is shared online at www.timlinder.com and within a created shared blackboard course.

One of the college's strategic priorities is to redesign student's educational experiences. Discussing and comparing the approaches and objectives of a number of other regional Digital Media programs helps as we make adjustment and growth of our own curriculum. This investigation helps to assess, evaluate, revise, and align student learning outcomes in the Digital Media Program.

GOAL 6: To investigate and make connections with professionals and businesses working with virtual environments in our region.

One of our Division goals to align with the college's strategic priorities is to maximize internal and external partnerships and resources to support and enhance learning.

I met with several area business and individuals within the field. Resulting in some becoming new members to our Digital Media advisory committee, student portfolio reviewers, attendance at our recent summer tech scan, planned speaking engagements, forthcoming field trips and potential student internships. Some of the individuals are as follows.

Matt Raithel - Studio Director at Graphite Labs

Within the past 10 years, he has held a production role in over 50 titles while helping to grow the company which now employs over 30 industry professionals. He is also teaches in the interactive design program at Maryville. Most of their current game titles are being developed with the tool Unity 3D, which was part of my sabbatical to learn. After our meeting we scheduled a visit for the interactive design and Motion Media design classes to tour Graphite Labs this Fall semester.

Chike Orjih - Asynchrony Labs

I met with Chike Orjih, a front end engineer at Asynchrony Labs. Asynchrony is an information technology consulting firm located in St. Louis, Missouri. Specializing in application development, mobile computing, systems and sensor integration, enterprise architecture, and tactical collaboration. Chike couldn't discuss a lot about his project but it focuses on detecting and defeating improvised explosive devices (IEDs). They have developed the Mobile Field Kit (MFK) puts state-of-the-art collaboration tools and real-time sensor data in the hands of tactical teams such as First Responders. The MFK allows team members to acquire, store, assess and share information, both within the team and across organizational boundaries. After My connection Chike served this summer on out Tech Scan for the Digital Media Program.

Daniel Wiseman - Chief Creative Officer and Co-Founder of Pixel Press

Pixel Press is a technology company based in Saint Louis. Their mission is to develop boundless experiences that empower people of all ages to create, share and play. All of Pixel Press' titles are based on Unity 3D and their two most popular utilize augmented reality. It started with Floors, a draw-and-play game that sets players free to create, play, and share their own games. They signed a partnership with Cartoon Network in 2014 to create Adventure Time Game Wizard. After our meeting Daniel served on our Digital Media Tech Scan, and reviewed graduating student work at our annual portfolio event. We also plan to add him as a new member in our advisory board.

Adam Sam and Seth Coster- Butterscotch Shenanigans -independent game studio creators

The have created multiple games for mobile and desktop. They also created the first St. Louis Game Jam (a 48 hour game development weekend now held three times per year). After our meeting we plan to have them speak on our campus and recruit students to join the game jam.

It is with a great deal of thanks to St. Louis Community College that I present some of the findings, projects, research, tutorials and demos I was allowed to develop during my Fall 2015 Sabbatical Semester. Examples of the sabbatical work can also be found here:

http://www.timlinder.com/?page_id=302